CLAIMS

1. A solid composite material comprising a matrix formed from a particulate or fibrous material and a cured thermosetting resin, wherein the cured thermosetting resin is derived from an oxidative cleavage product selected from aldehydes and peroxides and mixtures thereof formed by the oxidative cleavage of an unsaturated bond in an unsaturated plant or animal oil, other than the ozonolysis cleavage product of cashew nut shell liquid.

2. A solid composite material according to claim 1 wherein the particulate or fibrous material is an organic material.

3. A solid composite material according to claim 2 wherein the organic material is a lignocellulosic material.

4. A solid composite material according to claim 3 wherein the lignocellulosic material is selected from wood, straw, hemp, jute, flax, coconut fibre, rice straw and maize.

5. A solid composite material according to claim 4 wherein the lignocellulosic material comprises wood particles or wood fibre.

6. A solid composite material according to claim 1 wherein the particulate or fibrous material is an inorganic material.

7. A solid composite material according to claim 6 wherein the inorganic material is selected from inorganic particulates and fibres.

8. A solid composite material according to claim 6 wherein the inorganic material is selected from charcoal, marble (e.g. crushed marble), mineral fibre, mineral particles, ceramics, crushed rock, clay, coal, slate and glass, e.g. fibre glass.

9. A solid composite material according to any one of the preceding claims in sheet form or moulded form.

10. A solid composite material according to claim 9 in the form of a board or panel.

11. A solid composite material according to claim 10 in the form of a wood fibre board.

12. A solid composite material according to claim 10 in the form of a building board or panel.

13. A solid composite material according to any one of the preceding claims wherein the oxidative cleavage product is formed by the oxidative cleavage of an unsaturated plant oil.

14. A solid composite material according to claim 13 wherein the plant oil is selected from rapeseed oil, soyabean oil, olive oil, castor oil, mustard seed oil, ground nut oil and linseed oil.

15. A solid composite material according to any one of the preceding claims wherein the oxidative cleavage product is formed by ozonolysis of the oil.

16. A solid composite material according to claim 15 wherein the ozonolyis is followed by a reductive cleavage step to form the oxidative cleavage product.

17. A solid composite material according to claim 15 wherein the reductive cleavage step is effected by means of a reducing agent selected from metal/acid reducing agents and reducing sugars.

18. A solid foam material comprising a matrix formed from a cured resin, wherein the cured resin is derived from an oxidative cleavage product selected from aldehydes and peroxides and mixtures thereof formed by the oxidative cleavage of an unsaturated bond in an unsaturated plant or animal oil.

19. A solid foam material wherein the oil is as defined in any one of the preceding claims or is cashew nut shell liquid.

20. A resin composition, the resin composition being derived from an oxidative cleavage product selected from aldehydes and peroxides and mixtures thereof formed by the oxidative cleavage of an unsaturated bond in an unsaturated plant or animal oil.

21. A resin composition according to claim 20 wherein the oil is other than soya oil.

22. A resin composition according to claim 20 or claim 21 and including an acid or base catalyst.

23. A resin according to claim 22 when cured.

24. An article or composition formed from or comprising a resin as defined in any one of claims 20 to 23, the article or composition being selected from moulded panels, non-woven materials, fibre-glass products, boards, treated paper, treated fabric, spun textiles, toys (e.g. children's toys), lubricants, adhesives, castings, automotive components (such as bumpers, fenders, steering wheels, interior panels and mouldings, exterior trim and mouldings), upholstery (as padding or mouldings), bonded recycled materials, foundry castings and casting materials (for example binders for refractory articles), bearings, films and coatings, packaging, foams, paint components, pipes, architectural and building products such as door and window frames, varnishes, release controlling coatings such as release controlling coatings for pharmaceuticals, solid prosthetic devices and medical devices, and wood treatment agents, e.g. for preserving and modifying the properties of wood.

25. A curable material formed by oxidative treatment of a comminuted oil-bearing plant material, whereby the oxidative treatment has converted unsaturated bonds in the oil into an oxidative cleavage product selected from aldehydes and peroxides and mixtures thereof.

26. A curable material according to claim 25 wherein the oil-bearing plant material is an oil bearing seed, nut or bean, such as oilseed rape, or soya.

27. A curable composition comprising an aqueous emulsion or an aqueous alkaline solution containing an oxidative cleavage product selected from aldehydes and peroxides and mixtures thereof formed by the oxidative cleavage of an unsaturated bond in an unsaturated plant or animal oil as hereinbefore defined.

28. A composition according to claim 27 when cured.

29. A process for the production of aldehydes and/or peroxides, which process comprises the treatment of a vegetable oil with ozone (e.g. in the presence of an alcohol as a solvent for the oil) so that hydroperoxides are produced, and the reductive cleavage of the hydroperoxides with a reducing sugar.

30. A process according to claim 29 wherein the reducing sugar is a monosaccharide or a disaccharide, for example a hexose monosaccharide sugar such as glucose, mannose, allose, and galactose, and or a disaccharide such as maltose.